

THE EFFECTS OF RHYTHMIC ACTIVITY ON SELECTED PHYSIOLOGICAL AND PHYSICAL FITNESS PROFILE OF SCHOOL GOING CHILDREN

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Abstract:

This research included 30 Male student aged 14+ which made up the Experimental group, and 30 the control group. The effects of a rhythmic activity on selected physiological parameters and physical fitness profiles were studied. The experimental model of the recreational aerobic exercise model was realized six times a week, over a period of six weeks, and the duration of each individual exercise was 60 minutes. The variables used for physiological parameters were pulse rate, vital capacity and Blood pressure. Physical fitness profiles were accessed by using the variables muscular strength, muscular endurance, cardiovascular endurance and flexibility.

For rhythmic activity, aerobic dance was considered. The study was considered only for six weeks duration. The basic descriptive statistic parameters were calculated for all of the results, and the difference between the initial and final measuring was determined by 't' test.

KEYWORDS:

Rhythmic Activity , Physiological , Fitness Profile , aerobic exercise .

INTRODUCTION

Due to the high degree of automatization, modern man is experiencing a high degree of inactivity which is becoming an increasingly significant factor in the appearance of a great number of illnesses. In these current living conditions where technological development has directed man's activities from physical to intellectual labor, modern man is increasingly susceptible to a sedentary lifestyle. This brings about a decrease in physical activity, and thus leads to the endangerment of the health and normal functioning of organs and systems of organs. The threat to the health of sedentary individuals is conditioned by a decrease in the functioning of the locomotor, cardio-vascular, and respiratory system, as well as other organs and systems of organs. Physical inactivity and a sedentary lifestyle have a very negative effect on almost all of the systems of the human body, and especially on cardiovascular functions. The decrease in the functional abilities of the human body in the modern world, the development of hypertension and obesity are just some of

the problems which can be solved by regular physical activity. Fitness centers offer a variety of aerobic exercises to music as part of their exercise programs, in the form of various organized physical activities. What is characteristic about this kind of exercise is that all of the participants in the aerobic exercise program exercise to the same rhythm and to the same tempo, and thus activate muscles of various parts of the body.

METHOD & MATERIAL

The purpose of the study was to find out the effects of rhythmic activity on selected physiological parameters and physical fitness profiles on male students. 60 male students age 14 + randomly selected

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from Maharashtra Mandal, Pune (INDIA). The subjects were divided randomly in two equal groups. Group A (N-30) and B (N-30). Group 'A' under went a program selected Aerobic Dance and group 'B' was control group. Group 'A' followed the program of instruction for a period of 6 weeks and training was carried for 6 weeks. Measurement for various variables were taken at the beginning (pre- test) and at the end of experimental period, after six weeks (post-test). The data was collected before and after six weeks of experimental period by using standard tests.

Variables Selected & Tools Used

Physiological parameters: Pulse rate: pulse measuring in beats/minutes was counted with the help of important Pulse/HR Omron digital machine. Vital capacity: vital capacity was measured by using wet Spirometer in litter. Systolic and Diastolic blood pressure measured in mm/hg.

By using Omron B.P monitor (digital). Physical fitness profiles: Muscular strength was measured

in Centimetres/meters by standing Broad Jump, One Minute maximum Sit-Up test was used for Muscular endurance (measured in minutes). Cardiovascular Endurance measured by 12 min. Run & Walk test (measured in minutes). Curetons Sit & Reach Test was used to access the Flexibility (measured in Centimetres).

TRAINING SCHEDULE:

Group 'A' practice selected five aerobic dance activity in these student used to report in Maharashtra Mandal, Pune. Uniform consisted T-Shirt and Half Pants. The practice session was conducted for the period of 60 minutes day for the duration of six weeks.

ORIENTATION PROGRAMMED

- 1) Teaching of aerobic dance exercise practice
- 2) Teaching of exercise series and practice

Exercise Design
Training Schedule
Assembly
Warming up and stretching exercise 15 minutes
Aerobic dance Activity
1st and 2nd weeks
16 count exercise
Total Practices: 6 minutes, 7 repetitions = 42 minutes
Total Rest: 1.30 minutes, 6 between each repetitions = 1 minutes
3rd and 4th weeks
16 count exercise
Total Practices: 6 minutes, 8 repetitions = 48 minutes
Total Rest: 1 minute, 7 between each repetitions = 7 minutes

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5th and 7th weeks
16 count exercise
Total Practices: 6 minutes, 9 repetitions = 54 minutes
Total Rest: .30 minutes, 8 between each repetitions = 4 minutes

The dose of the practice for aerobic dance was 1st and 2nd week six minutes seven repetition, 3rd and 4th weeks six minutes eight repetition and 5th and 6th weeks six minutes nine repetitions respectively and the total time for the daily practice by the experimental group was between 42 to 54 minutes. The time for rest was between 1.30 minute, 1 minute and 0.30 minute as prescribed by experts. All together, the practices were schedule for one hour every day in the morning.

RESULT & DISCUSSION

The difference in the mean gain of each group for selected variable was tested for significance of difference by 't' test. The difference of initial and final scores was taken into account. The level of significance was set at .05 level of confidence. This suggests that there is no significant difference between the pre-test mean of experimental group and control group. This implies that both the groups are homogeneous with respect to SBJ performance at pre-test point. Similarly for the post-test t value is equal to 0.02 at 58 degrees of freedom is not significant at 0.05 significance level. This suggests that there is no effect of treatment on the standing broad jump test performance i.e. explosive strength of the subjects. This implies that both the groups are homogeneous with respect to sit ups performance at pre-test point. Similarly for the post-test mean difference in the experimental and control groups sit up performance is 7.13 and 't' value is equal to 3.27 at 58 degrees of freedom which is significant at 0.05 significance level. This suggest that there is effect of treatment on the sit ups test performance i.e. strength endurance of the subjects.

Effect of Rhythmic Activity on Flexibility

Group Statistics

Group N Mean S.D SEM

Experimental 30 6.35 1.54 0.28 Pre-test

Sit & Reach

Control 30 6.31 1.58 0.29

Experimental 30 7.40 1.38 0.25 Post-test

Sit & Reach

Control 30 6.41 1.60 0.29

The mean of pre-test of experimental group is 6.35 centimetres with standard deviation of 1.54 and that of control group is 6.31 centimetres and standard deviation of 1.58. Similarly mean of sit and reach post-test of experimental group is 7.40 centimetres and standard deviation is 1.38 and that of control group is 6.41 centimetres and standard deviation of 1.60.

CONCLUSION

Within the frame-work of the present investigation, the following conclusions may be drawn that there is significant effect of rhythmic activity on the Strength endurance, Cardiovascular-endurance, Flexibility and Vital capacity. And there was no significant effect on the parameters viz. Explosive strength, Resting pulse rate, Systolic B.P., Diastolic B.P. This study shows a significant improvement in almost all physical fitness can be achieved with a training program implemented at a school level. Further studies to classify fitness levels obtained by these programs based on more detailed analysis for training duration, training schedules as well as fitness indices will enable assessment of the most optimal training methods. Additionally this methodology could be applied to a female student population to investigate any differences in response between genders to fitness training in other countries.

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